Request	for free sample TEMP-PLATE. Pleas	e fill in the following in	formation completely:
Job Title	е		
Duties			
I would	like to evaluate TEMP-PLATES for use in	the following applications:	
☐ Keep me	e on your mailing list for new technical infor	mation and application data	about TEMP-PLATES.
☐ Have sa	les representative call telephone No.:	ext	for appointment.
☐ Send me	e information about other Pyrodyne products	5.	
What	other temperature problem do you have	ve? We may have the ansi	wer.
Name	T. Nelson, Syst.Eng.	Your change of address, or name of another interested person.	and address
Address	Interlocking Systems Co Box #546	·	
	Poughkeepsie, N.Y.	4104	
	PYRODYNE, Inc.	11876 Wilshire Boulevard, L	os Angeles 25, California

# FOR YOUR FREE **SAMPLE TEMP-PLATE**

Fill in and mail the attached postage-paid card...





PART NO. 240

# **PYRODYNE**

No Postage Stamp Necessary if Mailed in the United States

POSTAGE WILL BE PAID BY

PYRODYNE, INC.

11876 Wilshire Boulevard, Los Angeles 25, California FIRST CLASS
PERMIT NO. 42108

LOS ANGELES,
CALIFORNIA

11876 Wilshire Boulevard, Los Angeles 25, California









# 101 uses of the TEMP-PLATE \*

"Determine temperature of heat sinks used on transistors, power resistors and transformers" - Electro Nuclear Systems Corp.

"Airborne radio temperature problems" - Hallamore Electronics

"Design of instrumentation used in open heart research" - State University of New York

"Measure surface temperature of electrical components in high ambient temperatures" - Taylor Instrument Co.

"Check printed circuit temperatures during solder" - Electropac Inc.

"Determine temperature gradient over the surface of a fuel cell during heating for adhesive bond" - Chrysler Corp.

"Research and development on cooling factors" - Mincom Div. 3M Co.

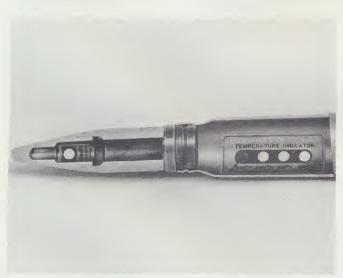
"Check the possibility of temperature chambers going over required setting" - Collins Radio Co.

"Warning indication for overheating of vacuum equipment" - Georgia Institute of Technology

"Indicate electrode temperatures in propellant heat transfer tests" - Aerojet General Corp.

"Police radios installed in automobile trunks during Florida summer vacation" - Town of Palm Beach, Florida

"Petroleum powerformer reactor skin temp." - International Refiners Inc.



DETECTS GUN CHAMBER TEMPERATURE

"DETECT OPERATING TEMPERATURE WITHIN AN A4D Mk-4 GUN POD AMMUNITION CHAMBER" - HUGHES AIRCRAFT CO.

"Operating temperature determination of automotive pistons" - Aluminum Co. of America

"Transistor temperature monitor" (180°-250°F.) - Master Electronics

"Transistor & heat sink temperature monitor, 100°C. and below" - Minneapolis-Honeywell

"Temperature check in fringe area of rocket motor exhaust blast" - USAE Waterways Exp. Station

"Detect hot spots on DC8 landing gear" - Douglas Aircraft Co.

"Indication of internal cabinet rack temperatures" - Ampex Corp.

"Placed in chassis at chronic hot-spots to see if temperature is prime cause" - Bendix Corp.

"Outside environment temperature check" - Magnetic Controls

"Inspection of heaters" - Sierralin Corp.

"Mark internal body of transducer for maximum temperature" - Gene Pettler

"Outdoor repeater applications" - Lenkurt Electronics

"60° to 70° on heat rise tests" - Stater RL, Inc.

"Measure wheel assembly temperatures after flight" - McDonnell A/C Corp.

"Automatic transmission checking" - Chevrolet-Cleveland

"Embed in clear epoxy to indicate maximum temperature & temperature limit of encapsulated part" - Motorola Inc.

"Indication of sterilizing temperatures" - Hunt Foods

"Tattle tale on electronic units coming from field for service" - United Control Corp.

"High temperature (600°-750° F.) water studies with direct immersion of Temp-Plate" - General Electric

"Inner tank of insulated semi-trailer stainless steel milk tank" - Portersville Stainless Equip.

"Monitor ordnance items in storage or transit" - USNOTS

"Temperature distribution over wing surface during heat curing of adhesive bond" - Nauman Company

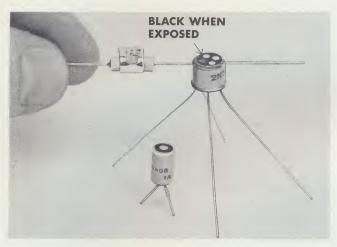
"Determine pipe temperature during application of pipe gripping tool" - American Iron & Machine

"Temperature check during relay testing" - Hartman Electrical Co.

"Monitor temperatures on high voltage components within gas filled radar modulator" - Raytheon Co.

"Check hot spots in inaccessible areas of power supply" - Magnetic Amplifiers

"Temperature check in steam autoclaves" - Chas. Pfizer & Co.



DETECTS ELECTRONIC OVERHEATING

"INDICATES TRANSISTORS EXCEEDING MAXIMUM OPERATING TEMPERATURES" - RCA AED

"B-28 flowmeter installation" - General Dynamics Corp.

"Temperature check on electronic equipment" - Litton Systems Div.

"Monitor maximum case temperatures of electronic components limited to  $225^{\circ}$  C. - Bendix Corp.

"Solid state equipment temperature control" - Grumman Aircraft

"Used as an aid in determining gear test standard oil pump temperature" - General Electric Co.

"Used to determine potential hot boxes" - Pennsylvania Railroad

"Indication of hot-spot points in printed circuits during environmental and life tests" - FMC Corp.

"Monitoring accidental overtemp conditions on the best units" - Bourns Corp.

"Determine temperatures on fluorescent lighting fixture ballasts" - General Electric Co.

"Skin temperatures on internally insulated vessels" - Texaru. Inc.

"J-79 engine mounted pressure ratio transmitter temp. indication" - General Dynamics Corp.

"Determine approximate temperatures to which hose assembly is subjected" - Resistoflex Corp.

"Indicate temperatures to which components are exposed during missile flight"- Bendix Corp.

"Use on all products to check that they are not used at temperatures above specification" - Vector Mfg.

"Check temperature of coating substrate interface during coating operation" - Mastic Corp.

"Used to test heat in coating oven" - Container Corp.

"Asbestos-cement pipe temperature check during drying operations" - Keasys & Mattison Co.

"Thermal analysis of space vehicle" - General Electric Co.

"Measure surface temperatures over large area" - Dow Chemical Co.

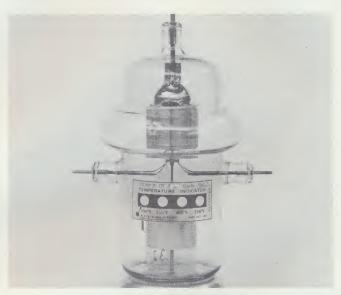
"Temperature recordings of aircraft electrical equipment" - General Electric Co.

"Temperature indication for solid and liquid fuel rocket engine" - Edwards AFB

"Lab equipment in storage, temp. check" - American Viscose

"Temperature check on hot oil tanks" - Buller Mfg.

"Brake carriers temp. check on B52 aircraft" - Bendix



DETECTS VACUUM TUBE TEMPERATURE

"VACUUM TUBE OPERATING TEMPERATURE DETERMINATION, 140°, 250°, 300° C." - DORMAN & JOHNSON

"Checking gear case temperature on diesel locomotive" - GMC, Electro-Motive Div.

"Indicate overload history of three phase induction motor" - Filter Materials Inc.

"Motor stator coil surface" - Milwaukee Railroad

"Temperature indication of oil well bottom hole temperatures" - Standard Oil of Calif.

"Measure temperatures during seed drying" - Penn. State University

"Monitor maximum temperatures during sample thermo-cycling" - Titeflex, Inc.

"Determine temperature rise of DC8 autopilot servos" - Sperry Gyroscope

"Glass enclosure sealing operation" - Minneapolis-Honeywell Aero.

"Oven Control Applications" - Bristol Company

"Chemical and Physical Systems at  $150^{\circ}$ - $450^{\circ}$  C." - U. S. Naval Ordnance Lab.

"Electra propeller spinner de-icing heater, overheat temperature survey" - Eastern Airlines

"Measurement of surface temperatures" - Spraymat Division

"Power resistor temperature checks" - Self Representative

"Measure transistor case temps while units are embedded in epoxy" - Robert F. Clark

"Monitor machine plate in region of critical shaft bearings to detect temperature rise preceding bearing failures" - Burroughs Corporation

"Relief of casting aluminum alloys (5 hrs. @ 450°F)-Sperry Gyroscope

"Transistor temperature during dip soldering" -RCA

"Monitor rocket chamber walls" - Picatinny Arsenal

"Check hotspots (65°C.) in our counters" - Systron-Donner Corp.

"Upper temperature limit of electronic equipment under test and during shipment" - Control Data Corp.

"Measure Film Temperature at projection aperture"-E. M. Merwin

"Surface temperature check on reactor vessels" - U O P Co.

"Transistor temperature monitoring" - Transdata, Inc.

"Hot gas valves" - Thiokol Chemical Corp.

"Analysis in prototype design and breadboard stage" - American Missile Products

"Molding machine heating cylinders, extruder barrels" - Foster Grant Co.

"Coal handling conveyors and storage areas" -  $\mbox{Wm}$ . F. Appleton

"Determination of maximum temperatures within a sealed container under actual operating conditions" - Remington Rand Univac

"Check for burned out transistors due to overheating" - Design Engineering

"Monitor temperature near O-rings and solder joints" - South Dakota School of Mines

"Biological Sterilization of components" - J P L

"Heat penetration of insulation on motors" - Aerojet General Corp.

"Solid State amplifier heat check" - General Dynamics Astronautics

"Paper coating experiments" - Eastman Chemicals

"Temperature and power dissipation on silicon diodes,  $300^{\circ}$  to  $650^{\circ}$  F." - Sperry Semiconductor

"Attach to back of pulp refiner plates" - Crown Zellerbach

"Indicator on shell of internally insulated vessel" - Pennsalt Chemicals

"Check to see if overheating caused failures in power transmission coupling of overhead crane" -Fenton Foley

"Measure temperature peak on internal part of hydraulic pump" - Be-Ge Mfg.

"Motor Control center" - Proctor & Gamble

TEMP-PLATE (R)

11876 Wilshire Boulevard Los Angeles 25, California

Telephone: 213-479-4401 TWX: 213-490-3916

### PRICE LIST

### TEMP-PLATE (R) TEMPERATURE INDICATOR

### HOW TO ORDER

PART NUMBER	SIZE	NUMBER OF INDICATORS	TEMPERATURE SELECTION	UNIT PRICE 10-1000 PCS.
200	5/16" sq.	1	100° thru 350°F 360° thru 490°F	\$ .60 .75
210	1" × 3/4"	1	100° thru 490°F 500° thru 1100°F	1.00
220	1" × 5/16"	2 2	100° thru 350°F 360° thru 500°F	1.25 1.50
240	3/4" × 1=3/4"	4 4 4 4 4 4 4 4 4 4 4	100-110-120-130°F 110-120-130-140°F 150-160-170-180°F 180-200-230-250°F 190-200-210-220°F 200-250-300-350°F 230-240-250-260°F 270-280-290-300°F 310-320-330-340°F 350-360-370-380°F 350-400-450-490°F 390-410-435-450°F  100° thru 490°F to Customer arrangement	1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50
		L <sub>+</sub> L <sub>+</sub> L <sub>+</sub> L <sub>+</sub>	500-525-550-600°F 600-650-700-750°F 750-800-850-900°F 950-1000-1050-1100°F	5.00 5.00 5.00 5.00
		4	500° thru 1100°F to Customer arrangement	6.50
260	3/4" × 2-1/2"	6	100°F thru 490°F to Customer arrangement	3.50
280	1-1/4" × 1-3/4"	8	100° thru 490°F to Customer arrangement	4.00

## TEMP-PLATE (R) PRICE LIST

PART NUMBER	SIZE	NUMBER OF INDICATORS	TEMPERATURE SELECTION	UNIT PRICE 10-1000 PCS.
322	2" × 3/16"	1	100° thru 350°F	\$ 1.25
410	3/16" dia.	1	110° thru 350°F	.60
430	1/8" × 1/4"	3 3 3 3 3	110-120-130°F 140-150-160°F 170-180-190°F 200-210-220°F 230-240-250°F	1.50 1.50 1.50 1.50
440	1/4" dia.	L <sub>+</sub>	110-120-130-140°F 120-130-140-150°F 140-150-160-170°F 150-160-170-180°F 160-170-180-190°F 190-200-210-220°F 230-240-250-260°F	2.25 2.25 2.25 2.25 2.25 2.25 2.25

Minimum purchase: 10 pieces any one temperature or temperature arrangement Quantities over 1,000 pieces quoted on request

Delivery: From stock to 30 days based on type and quantity ordered Prices are F.O.B. West Los Angeles, California; Net 30 Days

The above prices are subject to change without notice.

All Purchase Orders should be made to the WILLIAM WAHL CORPORATION, 11876 Wilshire Boulevard, Los Angeles 25, California, national distributors for TEMP-PLATES<sup>(R)</sup>.

Telephone: 213-479-4401

TWX: 213-490-3916



Direct Reading Temperature Indicating Stickers



Accurate Temperature Indication
Easy To Apply
Irreversible Record
Not Affected by Environment
Miniaturized
Economical

TEMP-PLATE APPLICATIONS
Research/Development/Field Tests/Preventative Maintenance/Safety



Aircraft & Missile Engine Accessories Armament Tests Blast Tubes & Deflectors Baking & Curing Equipment Brakes & Wheels Cooling & Heating Equipment Crew, Passenger & Cargo Compartments Drying Equipment Electrical Appliances Electronic Components & Equipment Fire Protection Food Handling Equipment & Food Supplies Fuel Pumps & Storage Tanks Furnaces & Heaters Ground Support & Checkout Equipment Heat Exchangers & Radiators Hydraulic & Pneumatic Equipment Liquid & Solid Propellants Medical Equipment Mixing Equipment Motors & Inverters Nose Cones & Tail Cones Portable Power Supplies Pyrotechnics | Railroad Equipment Refrigerator Trucks Shipping Containers Sterilizing Equipment Transformers & Toroids









SOLID STATE APPLICATIONS

### TEMP-PLATE®

The small temperature-indicating sticker that is revolutionizing temperature instrumentation.

Temp-Plates contain heat-sensitive elements that are hermetically sealed in laminated, high-temperature-resistant plastic. The stickers have excellent adhesive quality for positive, easy mounting to almost any clean, dry surface.

No activator is required for the adhesive. Just remove the backing material and apply the Temp-Plate to the test surface.

Temp-Plates will resist exposure to solvents, fuels, grease, oil, water, steam and reducing atmospheres. They can be immersed in hot liquids and will not crack, tear, wrinkle or lose indicating sensitivity.

Temp-Plates will indicate calibrated temperature with accuracy of  $\pm 1\%$ . Stated temperatures are indicated by a change of the indicator from pastel to solid black. The change to black is irreversible and cannot be altered, serving as a positive record of temperature exposure.

Temp-Plates are useful wherever temperature is an important consideration. For industrial operating and processing equipment, the Temp-Plate provides a quick, easy check of operating conditions. In system tests, Temp-Plates insure positive monitoring of maximum ambient temperatures, either as a backup for recording equipment, or for use in hard-to-reach places. For shipment or storage, the Temp-Plate is a rugged silent servant that faithfully records overheating. Throughout industry, Temp-Plates are serving in hundreds of daily uses where quick, positive indication of critical temperature is mandatory.

STANDARD TEMP-PLATES TEMPERATURE SELECTION\*

100°	220°	340°	480°	950°
110	230	350	490	1000
120	240	360	500	1050
130	250	370	525	1100
140	260	380	550	
150	270	390	600	+
160	280	400	650	
170	290	410	700	
180	300	420	750	
190	310	435	800	
200	320	450	850	
210	330	465	900	

All-metal Temp-Plates with ceramic insulators are available for temperatures up to 500°F. Special models furnished on request.

\* (degrees Fahrenheit)

PYRODYNE, INC.

#### STANDARD TEMP-PLATES





Part No. 260



Part No. 240





Part No. 200









Part No. 430

STANDARD MODELS SHOWN IN ACTUAL SIZE.

#### **SPECIFICATIONS**

Part Number	Number of Temperature Indicators	Min. Bend Radius	Size Width	Height
280	8	3/16"	13/4"	11/4"
260	6	3/16"	$2\frac{1}{2}''$	3/4"
240	4	3/16"	13/4"	3/4"
210	1	3/16"	1"	3/4"
200	1	3/16"	1/4"	1/4"
440*	4	1/16"	1/4" Diameter	
430	3	1/16"	9/32"	1/8"
410	1	1/16"	3/16" Diameter	

Reaction time is less than one second-accuracy ±1%

Maximum thickness, all models, .013".

All models not available in all temperatures. Standard models for use above 500°F are made of stainless steel, with separate adhesive.

\*No temperature ratings are printed on the #440. Temperatures read clockwise, from low to high, from the index mark which is color coded for temperature range.

#### **HOW TO ORDER**

- 1. Select Temp-Plate part number, in accordance with the number of temperature indicators and size wanted.
- 2. State the temperature increments required.
- 3. State quantity desired when ordering.

Send the above information to Pyrodyne, Inc., or a Pyrodyne sales representative.

#### OTHER PYRODYNE PRODUCTS

Thermally actuated switches, valves, regulators and controls; explosive valves; burst diaphragm fluid safety valves; specialized filters for high pressure fluid systems.

PYRODYNE, INC.

11876 Wilshire Boulevard Los Angeles 25, California 213-479-4401